

Appl No. 10/647,613  
Amdt. dated April 10, 2006  
Reply to Office Action of January 10, 2006

### REMARKS

Applicant has carefully reviewed the Office Action mailed January 10, 2006, prior to preparing this response. Currently claims 1-32 are pending in the application, wherein claims 1, 2, 5, 7, 9-11, 14, 16, 18, 19, 21, 22, 25, 26, 28, 29 and 32 have been rejected, and the remainder of the claims have been withdrawn from consideration consequent an Examiner-initiated restriction requirement. Claims 1, 10, 19 and 26, as well as the specification, have been amended with this response. These are merely clarifying amendments, and no new matter has been added with these amendments. Favorable consideration of the following remarks is respectfully requested.

Claims 1, 2, 5, 7, 9-11, 14, 16, 18, 19, 21, 22, 25, 26, 28, 29 and 32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Samson et al., U.S. Patent No. 5,827,201 (hereinafter "Samson"). Applicant respectfully traverses this rejection including all statements made in the Office Action. The Examiner stated in the Office Action:

Samson et al discloses a medical guidewire 100 comprising a tapered elongate shaft 142 coupled to a coil 132 of composite wire or ribbon helically disposed and comprised of two different materials (column 8 lines 10-13) wherein the outer material is for example a radiopaque coating (column 15 lines 4-7) and has a larger Young's modulus than that of the inner material. In addition the composite wire comprising a cross-section with a centroid, a moment of inertia with respect to an axis running through the centroid and parallel to the longitudinal axis of the coil, and a moment of inertia with respect to an axis running through the centroid and parallel to the radial axis of the coil, wherein the moment of inertia with respect to an axis running through the centroid and parallel to the longitudinal axis of the coil is greater than the moment of inertia with respect to an axis running through the centroid and parallel to the radial axis of the coil.

Applicant respectfully disagrees with the Examiner's statement of what is disclosed in Samson. Namely, Applicant disagrees with the Examiner's attempt to equate the ribbon braid 132 as taught in Samson with the coil as currently claimed. The guidewire taught in Samson generally includes four components, a core wire, a ribbon braid, a coil, and a polymeric layer placed over the assembled metallic components. See Samson, column 4, lines 8-21. As shown in Figure 2 of Samson, element 132 is a ribbon braid, not a coil as suggested by the Examiner. See Samson, column 5, lines 59-62. Thus, suggesting the ribbon braid 132 is a coil as currently claimed runs afoul of the express teachings of Samson.

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Nevertheless, regarding claims 1 and 10, the ribbon forming the braid 132 shown in Figure 2 would not possess the same bending characteristics of the wire forming the coil as currently claimed. As shown in Figure 2, the ribbons of the braid 132 have a width (in the longitudinal direction) greater than the thickness (in the radial direction). Such a ribbon, formed of a super-elastic alloy (see column 8, lines 10-11) would not possess the bending characteristics of the wire as currently claimed. Namely, the ribbon braid 132 would not have a moment of inertia with respect to an axis running through the centroid and parallel to the longitudinal axis of the coil that is greater than a moment of inertia with respect to an axis running through the centroid and parallel to the radial axis of the coil. Other than reciting the language of the claim, the Examiner has not indicated how the ribbon braid 132 meets this limitation.

Applicant notes the moment of inertia as described in the current application, which is otherwise known as the second moment of area, is a property of a shape which may be used to determine the resistance to bending and deflection of the shape. In general, a shape is more efficient to resist bending when the greater part of its mass is as far as possible from its centroid. This is evidenced by the equations provided at page 13, line 7 of the current application. Due to the dimensional characteristics of the cross section of the ribbon illustrated in Figure 2, the moment of inertia with respect to an axis running through the centroid and parallel to the radial axis of the braid 132 is greater than the moment of inertia with respect to an axis running through the centroid and parallel to the longitudinal axis of the braid 132. This is converse to that which is claimed in claims 1 and 10.

For at least this reason, as Samson fails to anticipate claim 1 or 10, these claims are believed patentable over Samson. Claims 2, 5, 7, 9, 11, 14, 16 and 18, which depend from either claim 1 or 10 and include additional limitations, are also believed patentable over Samson. Therefore, withdrawal of the rejection of claims 1 and 10, as well as all claims depending from either claim 1 or 10, is respectfully requested.

Furthermore, while apparently referring to passages of Samson at column 8, lines 10-13 and at column 15, lines 4-7, the Examiner erroneously characterizes the "coil" as a "composite wire or ribbon" being "comprised of two different materials". See Office Action, page 3. At no point within these referenced passages does Samson characterize the ribbons of the braid 132 as being made of two different materials. In particular, at no point does Samson describe the ribbon braid 132 as having a radiopaque coating. The passage at column 15, lines 4-7 of Samson,

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referenced by the Examiner in support of the erroneous assertion, teaches that the polymeric tie layer (which is shown in Figure 2 as element 134, See column 14, lines 29-32) may be formulated or blended to include radiopaque materials. As taught in Samson, the polymeric tie layer 134 is a discrete component of the guidewire, and not a material of the ribbon braid 132 as suggested by the Examiner. See Samson, column 4, lines 8-21. As shown in Figure 2, the polymeric tie layer 134 is a continuous layer of polymer material which is placed over the formed braid 132 subsequent to bonding the braid 132 to the core wire 130. Therefore, contrary to the Examiner's assertion, this passage does not suggest the ribbon forming the braid includes an outer radiopaque coating.

For at least these reasons Samson fails to teach the limitations of a composite wire, including a first material and a second material, forming a coil as claimed in claims 19 and 26. Claims 21, 22, 25, 28, 29 and 32, which depend from either claim 19 or 26 and include additional limitations, are also believed patentable over Samson. Therefore, withdrawal of the rejection of claims 19 and 26, as well as all claims depending from either claim 19 or 26, is respectfully requested.

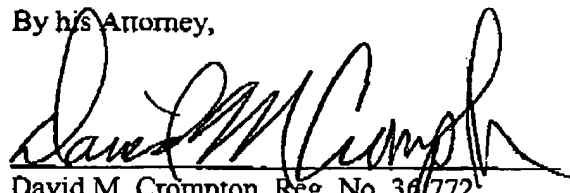
Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By his Attorney,

Date: 4/10/06



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